SIDEROXYLON ALACHUENSE, A NEW NAME FOR *BUMELIA ANOMALA* (SAPOTACEAE)

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ABSTRACT

Bumelia anomala is transferred to the genus *Sideroxylon*, where the species must be given a new name because the former specific epithet is preoccupied in the latter genus. Additional (new) morphological data are added to the species description, and the species' salient features and rarity are evaluated.

RESUMEN

Bumelia anomala se transfiere al género *Sideroxylon*, donde la especie debe recibir un nombre nuevo porque el epíteto específico está ocupado en este género. Se añaden nuevos datos morfológicos a la descripción de la especie, y se evalúan las características más sobresalientes y raras.

KEY WORDS: Sapotaceae, *Sideroxylon*, *Bumelia*, silver buckthorn, Florida, rare plants, endemics.

The silver buckthorn, *Bumelia anomala* (Sarg.) Clark, has a varied taxonomic history. It was originally described as a variety of *B. lanuginosa* (Michx.) Persoon (Sargent 1921) and was elevated to species rank by Clark (1942). Cronquist regarded it as "an uncommon but widely distributed form" of *B. tenax* (L.) Willd. (Cronquist 1945). Godfrey (1988) treated it as a species, whereas Wunderlin (pers. comm.) includes it within *B. tenax* with no infraspecific taxonomic status. Pennington (1990, 1991) has made a good case for transferring all *Bumelia* into *Sideroxylon*, but he did not mention *B. anomala* at any level.

Our studies indicate that *Bumelia anomala* is a distinctive, rare endemic of central Florida, and that it merits recognition as a species. Unfortunately, the epithet *anomala* is preoccupied within *Sideroxylon*, so a new name is proposed here:

Sideroxylon alachuense L.C. Anderson, nom. nov. BASIONYM: *Bumelia lanuginosa* var. *anomala* Sarg., J. Arnold Arbor. 2:168. 1921. *Bumelia anomala* (Sarg.) Clark, Ann. Missouri Bot. Gard. 29:169. 1942. *Bumelia tenax* forma *anomala* (Sarg.) Cronq., J. Arnold Arbor. 26:456. 1945. TYPE: FLORIDA: [ALACHUA CO.:] Gainesville, 17 Jun 1917, *T.G. Harbison 47* (A-2 sheets). Sargent (1921) erroneously listed this collection from Hancock County (which does not exist in Florida), *non Sideroxylon anomalum* (Urban) T.D. Pennington, Fl. Neotropica Monogr. 52:123. 1990.

The species is named for its occurrence at Alachua Sink (type locality), part of Paynes Prairie State Preserve near Gainesville in Alachua County, Florida.

Additional collections: **Alachua Co.:** Paynes Prairie State Preserve near Gainesville, 25 Jul 1918, *T.G. Harbison 61* (A), *T.G. Harbison 64* (A); 20 Jul 1919, *T.G. Harbison 97* (A); 30 Nov 1934, *L.E. Arnold & E. West s.n.* (FLAS); 7 Oct 1980, *W.S. Judd 2824* (FLAS); 25 Jul 1982, *J.C. Easterday 932* (FLAS); 7 May 1984, *R.K. Godfrey 81292* (FSU); 22 Jun 1984, *R.K. Godfrey 81389* (FSU); 12 Jun 1996 (three trees, Alachua Sink progeny on R.W. Simons' Gainesville property), *L.C. Anderson 16579* (FSU), *L.C. Anderson 16580* (FSU), *L.C. Anderson 16581* (FSU). **Marion Co.:** Silver River State Park, May 1985, *R.W. Simons s.n.* (FSU). **Orange Co.:** near Orlando, 11 Nov 1917, *T.G. Harbison 51* (A).

Small trees up to 9.2 m tall and 1.3 dm DBH; juveniles occasionally growing as low shrubs, spreading by horizontal rhizomes; long shoots (elongation or leader) bright green and with scattered pale hairs when young, often with sharp green thorns to 20 mm long, at nodes; some thorns becoming short spur-shoots (cf. Godfrey 1988 for illustration). Mature shoots glabrous, gray-white, becoming thick and rigid. Leaves (3–)4–6(–9) cm long, (11–)16–30(–39) mm wide, petioles up to 5 mm long; blades on long shoots ovate-elliptic to rhombic or broadly obovate, tips obtuse to emarginate, those on spur-shoots smaller, usually oblanceolate to elliptic. All blades lustrous, dark green above with finely bony-cartilaginous reticulate veins, metallic-silver below with compacted dolabrate, sericeous hairs that hide the surface. Flowers 5–6-merous, 10–20 in umbellate clusters on spur-shoots, tawny pubescent pedicels 4.5–5 mm long. Calyx 3–4.5(–6) mm long, outer two sepals shorter,nearly orbicular, longer inner sepals narrower and often emarginate; all scruffy pubescent with mostly silver hairs plus small patches of light golden-brown hairs. Corollas white, 4.2–5(–6) mm long, petals 3-pronged, central prong longer and slightly spreading. Staminodes narrowly deltoid, obtuse, rarely minutely erose, nearly as long as and alternate the petals. Stamens opposite the petals, filaments somewhat dilated proximally, 1.7–1.9 mm long, anthers saggitate, 1.4–1.5 mm long. Pistils velutinous, ovaries 1.5–1.8 mm, styles 1.4–1.5 mm long at anthesis. Single-seeded berries shiny black, oblong or rarely ovate, glabrescent with patches of hairs distally, 11–13 mm long and 10–11 mm wide excluding persistent 1–1.5 mm style. Seeds light brown, smooth, 9–10 mm long and 6 mm wide.

This species has often been considered conspecific with *S. tenax*. However, the two entities may be distinguished as follows:

Twigs lightly colored, glabrous or nearly so at maturity. Leaves (3–)4–6(–9) cm long, (11–)16–30(–39) mm wide, dark green above, shiny white below. Flowers 5–6-merous, in small clusters on spur-shoots, on pedicels 4.5–5 mm long, calyces 3–4.5(–6) mm long, anthers 1.4–1.5 mm long, styles 1–1.5 mm long. Flowering mid–late July. ..... **S. alachuense**

Twigs dark brown to golden, coppery, or rusty, densely pubescent. Leaves (2.5–)4–5(–7.5) cm long, (6–)9–15(–30) mm wide, dull green above and brownish or rusty below. Flowers 4–5-merous, in larger clusters on pedicels 4–9(–12) mm long, calyces 2–2.8 mm long, anthers ± 1 mm long, styles 1.2 mm long. Flowering early–mid-June in central Florida. ..... **S. tenax**

The silvery dolabrate hairs of *S. alachuense* are strongly appressed and unidirectionally aligned, whereas the generally scruffy brown hairs of *S. tenax* are more interwoven, some twisted and ascending when observed through scanning electron microscopy. Distinctive stomatal patterns on the leaves provide additional characters diagnostic among *Sideroxylon* taxa (Anderson 1996). Stomatal density per unit of leaf surface is lower in *S. alachuense* than in *S. tenax*. The prominent peristomatal rims that nearly hide the guard cells are generally narrower and longer in *S. alachuense* than in *S. tenax*.

Sideroxylon alachuense (as *Bumelia anomala*) is listed as endangered in Florida (Coile 1993). Known occurrences are few; perhaps only 20 plants exist in the wild. About 20 plants are in cultivation in Gainesville through the efforts of R. W. Simons. It is the rarest and perhaps the most beautiful buckthorn in the United States.

ACKNOWLEDGMENTS

Bob Simons is responsible for most of our distributional knowledge about the silver buckthorn. He is thanked for allowing me to collect from his plants, taking me into the field to observe buckthorns, and providing me with flowers and fruits (which are quite tasty). Ted M. Barkley made helpful suggestions on the manuscript.

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